

In the Claims

Please cancel claims 1-16 and 35-46 without prejudice.

Claims 17-34 remain in the application and are listed below:

1.-16. (Canceled).

17. (Original) A method comprising:

providing a filter graph comprising multiple filters, the filter graph being configured to process multiple timestamped data streams for rendering the data streams in accordance with data stream timestamps;

providing a synchronization module associated with the filter graph, the synchronization module being configured to:

query individual filters of the filter graph to ascertain input timestamp-to-output timestamp mappings,

compute adjustments that are to be made to output timestamps in order to synchronize the data streams, and

instruct individual queried filters to adjust their output timestamps in accordance with computed adjustments;

querying individual filters of the filter graph, using the synchronization module, to ascertain input timestamp-to-output timestamp mappings;

computing, based on the ascertained input timestamp-to-output timestamp mappings, adjustments that are to be made to output timestamps in order to synchronize the data streams; and

1 synchronizing the data streams by instructing one or more of the queried
2 filters to adjust their output timestamps in accordance with the computed
3 adjustments.

4
5 18. (Original) The method of claim 17, wherein the act of synchronizing
6 comprises doing so periodically.

7
8 19. (Original) The method of claim 17, wherein the act of synchronizing
9 comprises determining whether the multiple time-stamped data streams are within
10 a defined tolerance and, if not, performing said act of synchronizing.

11
12 20. (Original) The method of claim 17, wherein the act of querying
13 comprises querying individual filters for a current input timestamp and a current
14 output timestamp.

15
16 21. (Original) The method of claim 20, wherein the act of computing
17 comprises:

18 extrapolating at least one curve characterizing the timestamp mappings for
19 at least one of the timestamp mappings to a defined point corresponding to a
20 common input timestamp; and

21 computing said adjustments based on the extrapolated line(s).

22
23 22. (Original) The method of claim 21, wherein the act of extrapolating
24 comprises performing a linear extrapolation.

1 23. (Original) The method of claim 21, wherein the defined point
2 comprises the largest value of an input timestamp returned by the act of querying.

3
4 24. (Original) The method of claim 21, wherein the act of computing
5 comprises computing a skip value by taking the difference between the largest
6 output timestamp value at the common input timestamp and the output timestamp
7 value for said at least one curve at the common input timestamp.

8
9 25. (Original) The method of claim 24, wherein the act of instructing
10 comprises instructing one or more filters to jump their output timestamp values by
11 an associated skip value at the common input timestamp.

12
13 26. (Original) An architecture comprising:
14 a filter graph comprising multiple filters, the filter graph being configured
15 to process multiple timestamped data streams for rendering the data streams in
16 accordance with data stream timestamps; and
17 a synchronization module associated with the filter graph, the
18 synchronization module being configured to:
19 query individual filters of the filter graph to ascertain input timestamp-to-
20 output timestamp mappings,
21 compute adjustments that are to be made to output timestamps in order to
22 synchronize the data streams, and
23 instruct the queried filters to adjust their output timestamps in accordance
24 with its adjustment computations.

25

1 27. (Original) The architecture of claim 26, wherein the synchronization
2 module is configured to periodically instruct one or more of the queried filters to
3 adjust their output timestamps.

4
5 28. (Original) The architecture of claim 26, wherein the synchronization
6 module is configured to determine whether the multiple time-stamped data streams
7 are within a defined tolerance and, if not, at least instruct one or more of the
8 queried filters to adjust their output timestamps.

9
10 29. (Original) The architecture of claim 26, wherein the synchronization
11 module is configured to query individual filters for a current input timestamp and
12 a current output timestamp.

13
14 30. (Original) The architecture of claim 29, wherein the synchronization
15 module is configured to compute adjustments by:

16 extrapolating at least one curve characterizing the timestamp mappings for
17 at least one of the timestamp mappings to a defined point corresponding to a
18 common input timestamp; and

19 computing said adjustments based on the extrapolated line(s).

20
21 31. (Original) The architecture of claim 30, wherein the synchronization
22 module is configured to linearly extrapolate said at least one curve.

1 32. (Original) The architecture of claim 30, wherein the defined point
2 comprises the largest value of an input timestamp returned by querying the one or
3 more filters.

4
5 33. (Original) The architecture of claim 30, wherein the synchronization
6 module is configured to compute adjustments by taking the difference between the
7 largest output timestamp value at the common input timestamp and the output
8 timestamp value for said at least one curve at the common input timestamp.

9
10 34. (Original) The architecture of claim 33, wherein the synchronization
11 module is configured to instruct one or more filters to jump their output timestamp
12 values by an associated skip value at the common input timestamp.

13
14 35.-46. (Canceled).